

AMENDMENTS TO THE CLAIMS, COMPLETE LISTING OF CLAIMS
IN ASCENDING ORDER WITH STATUS INDICATOR

Claims 1-19 (Canceled).

20. (Currently Amended) A liposomal vaccine composition comprising a plasmid encapsulated within a liposome, said plasmid comprising a gene encoding for a hemagglutinin protein, wherein the liposome is prepared from a lipid film obtained by rotaevaporation.

21. (Previously Presented) The composition as claimed in claim 20, which is deliverable to a respiratory tract using intranasal administration and/or by aerosol inhalation.

22. (Previously Presented) The composition as claimed in claim 20, which prevents or treats an influenza virus infection.

23. (Previously Presented) The composition as claimed in claim 20, which elicits long-lasting protective antiviral immune responses against influenza viruses.

24. (Previously Presented) The composition as claimed in claim 20, wherein the plasmid is a plasmid vector construct pCI-HA10 which expresses said hemagglutinin protein in a host.

25. (Previously Presented) The composition as claimed in claim 20, wherein the plasmid and liposome are present in a concentration which ensures encapsulation of said plasmid in said liposome.

26. (Previously Presented) The composition as claimed in claim 20, wherein the concentration by weight of liposome is 25 times the concentration by weight of plasmid.

27. (Previously Presented) The composition as claimed in claim 20, wherein said liposome comprises a formulation of 7% 1,2 dioleoyl-3-dimethylammonium chloride (DODAC), 78% 1,2-dioleoyl-sn-glycerol-3-phospho-ethanolamine (DOPE) and 15% polyethylene glycol C8 ceramide (PEG₂₀₀₀C₈CER).

28. (Currently Amended) A method of producing a liposomal vaccine composition, said method comprising:

(1) preparing 7% DODAC, 78% DOPE, and 15% PEG₂₀₀₀C₈CER at 10mg/ml concentrations to form a lipid film using rotaevaporation carried out at 50 °C for 2 hours under vacuum;

(2) incubating the lipid film at 50 °C for 2 hours under vacuum;

(3) reconstituting the lipid film with distilled water and 1M β -octylglucanopyranoside detergent at 20% of the total preparation volume;

(4) adding a plasmid DNA to the lipid film at a concentration of 400 μ g DNA/ml ~~of~~ to 10 mg/ml of lipid mixture solution, said plasmid comprising a gene encoding for a hemagglutinin protein;

(5) transferring the reconstituted preparation into dialysis tubing and dialyzing in 1X HEPES buffer solution (150 mM NaCl, 20 mM Hepes, pH 7.4) at 23 °C for 15 hours; and

(6) removing the free, non-encapsulate plasmid DNA from encapsulated plasmid DNA on a DEAE Sepharose CL-6B anion exchange column to obtain the liposomal vaccine composition comprising the encapsulated plasmid DNA within the liposome.

29. (Previously Presented) A method for preventing and/or treating influenza virus infection, comprising administering to a patient in need thereof a pharmaceutically effective amount of the composition of claim 20.

30. (Previously Presented) The method as claimed in claim 29, wherein the composition is administered to a respiratory tract using intranasal administration, and/or aerosol inhalation.

31. (Previously Presented) A method for eliciting long-lasting protective antiviral immune responses against influenza viruses, comprising administering to a patient in need thereof a pharmaceutically effective amount of the composition of claim 20.

32. (Previously Presented) The method as claimed in claim 31, wherein the composition is administered to a respiratory tract using intranasal administration, and/or aerosol inhalation.